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(58) Field of search

B8D

B8P

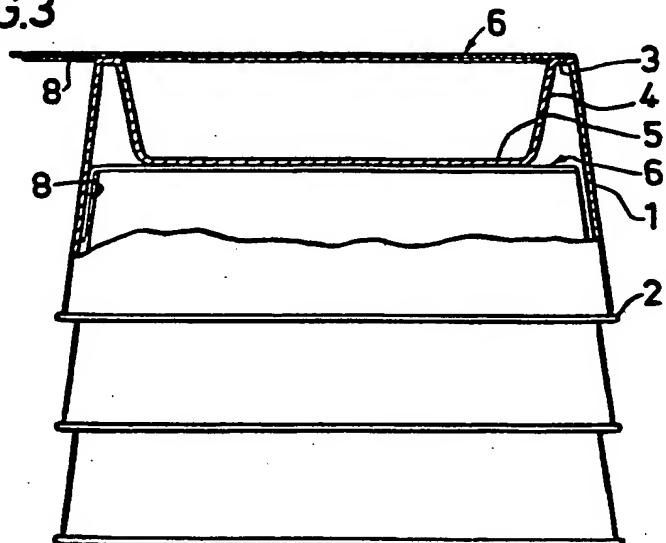
A1M

A4A

(54) **Medicine cup**

(57) A stackable cup provided with a lid, particularly intended for portioning medicine in solid state, consists of an outer wall 1 conically tapering from an open bottom to an upper edge 3 from which a downwardly tapering inner wall 4 extends to a closed bottom 5 spaced upwardly from said open bottom to lie inside the outer wall 1. Such cups may be stacked with or without lids. The lid 6 is releasably adhered to the upper edge 3 by an adhesive layer on the lid. Within the lid zone adhering to the upper edge, the lid is provided with a non-adhesive underlayer 11 over the adhesive layer. The lid consists of a layer 10 of white paper provided with an adhesive material and an underlayer of silicon-treated paper and are punched out of a composite sheet of these materials. Data of patients and kinds of medicine can be printed or otherwise marked on the lid.

**FIG.3**



**FIG.5**

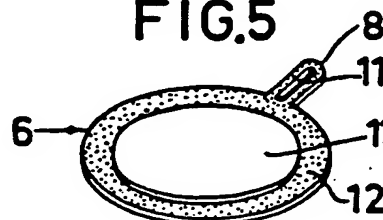


FIG.1

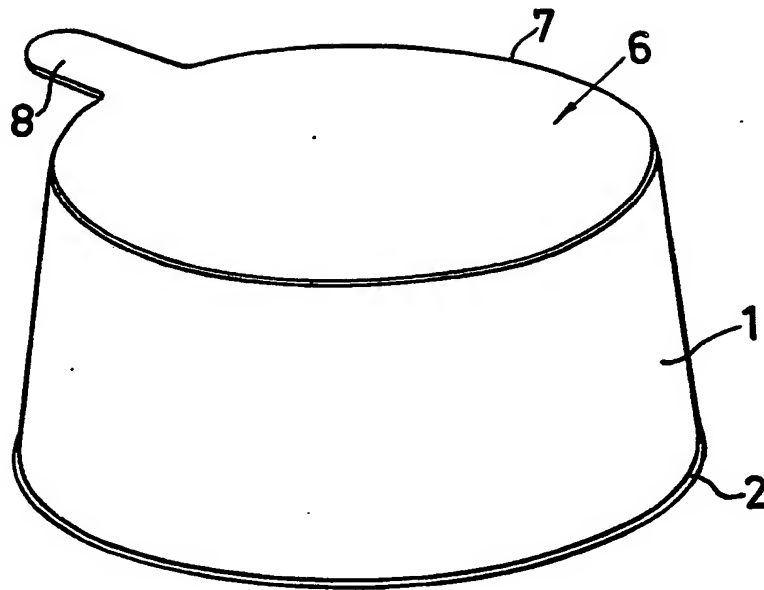


FIG.2

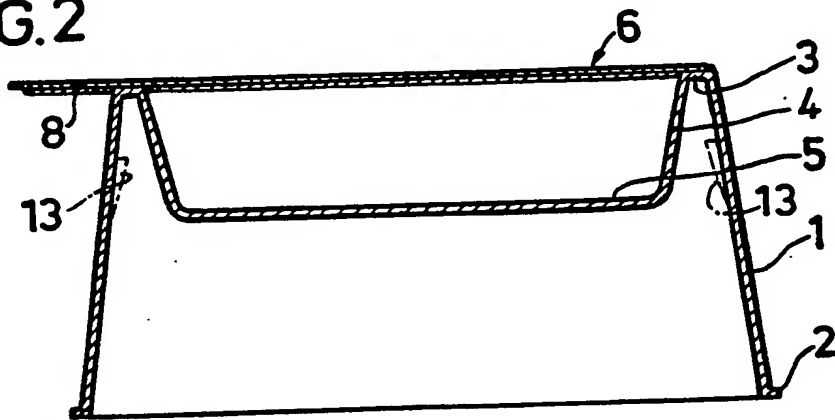


FIG.3

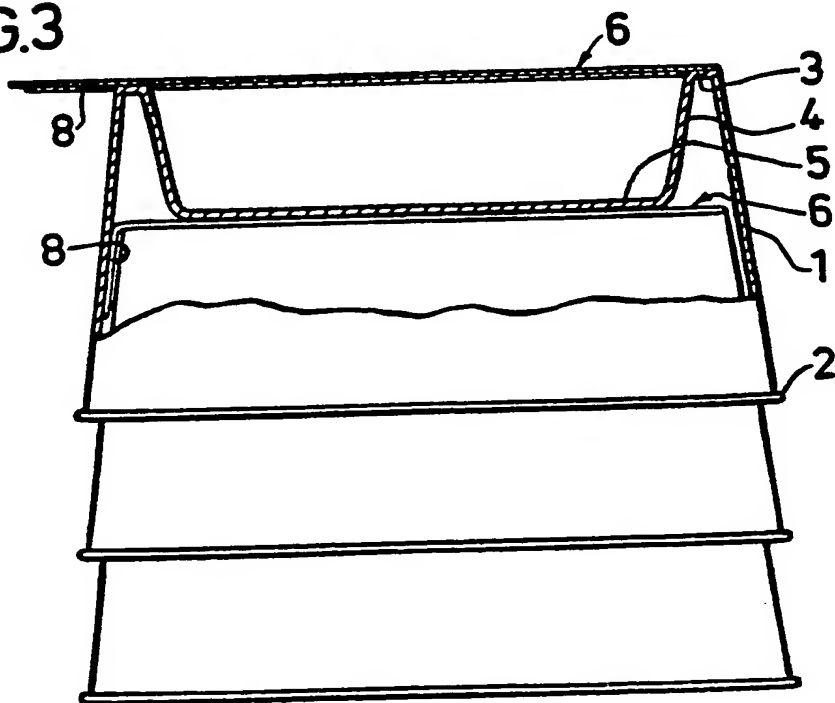


FIG.4

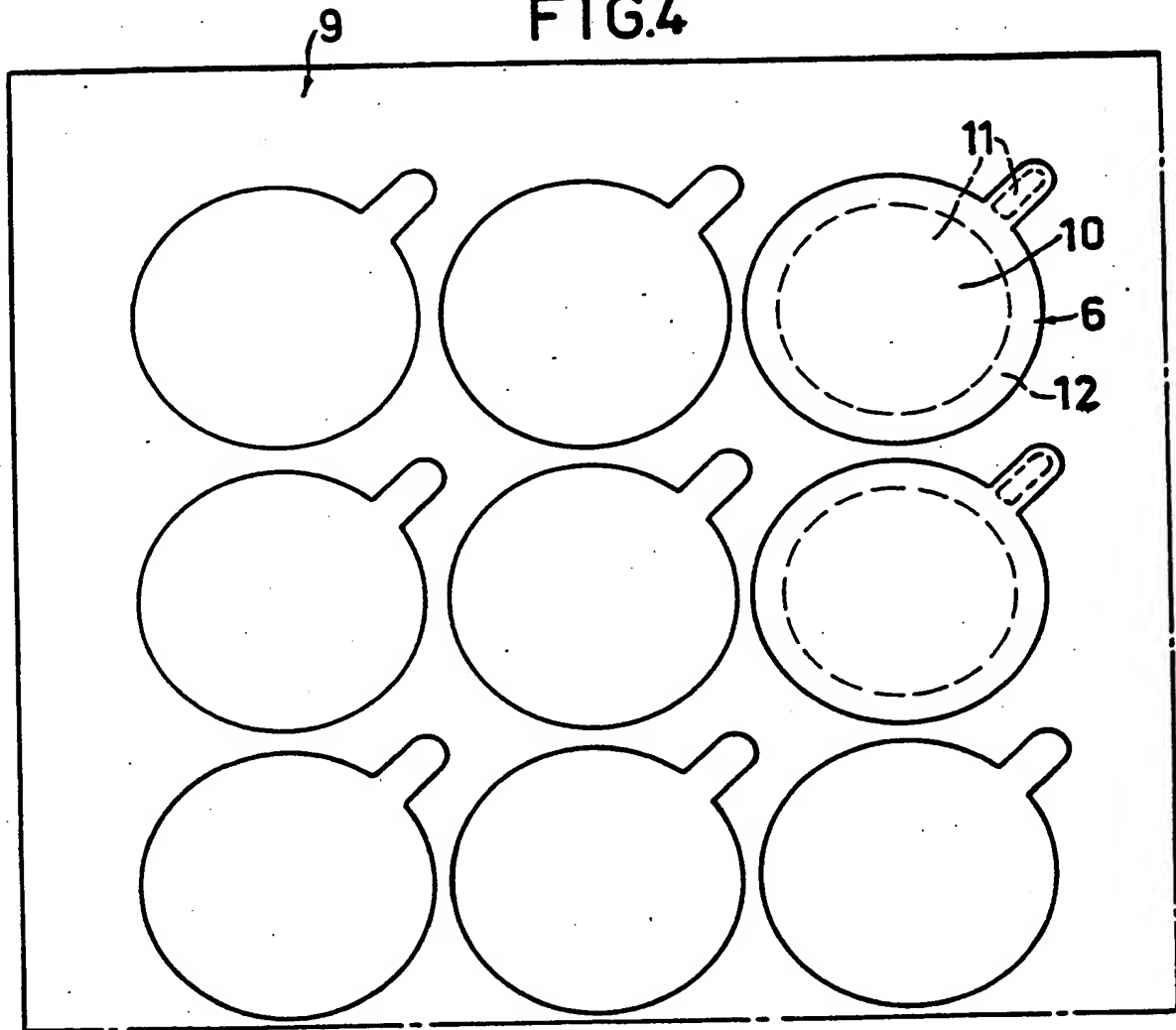


FIG.6

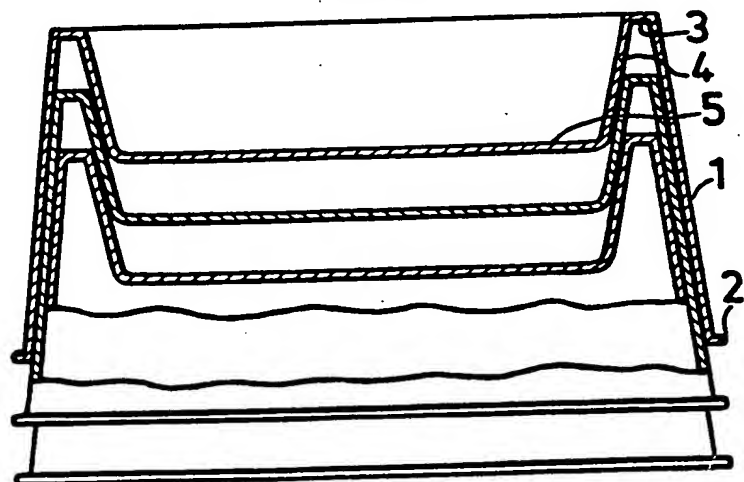
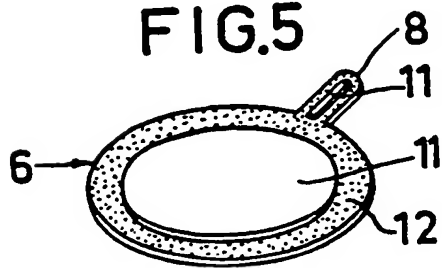


FIG.5



## SPECIFICATION

### Medicine cup

5 The present invention relates to a stackable cup, particularly intended for portioning solid medicine to patients in hospitals or the like.

It is previously known to use for such portioning small plastic cups which usually  
10 are formed in a shape which extends conically upwards from bottom to open end. In order to close the cup there is provided a lid provided with a downwardly directed flange, which is forced over the open end. Data about the  
15 patient in question is usually written on the lid with Indian ink pen. A disadvantage with such a cup is that the marking with the Indian ink pen is time-consuming and can also be difficult to read and therefore there is also a risk  
20 of incorrect reading. Another great disadvantage is that such cups often are not stackable and therefore cups for one patient who requires several medicines occupy a comparatively large space both when preparing cups  
25 with medicines for patients in a hospital department and when distributing the cups. Also because of this multiplicity of separate cups there is a certain risk of wrong distribution.

Said disadvantages are obviated or mitigated by the present invention.

According to the present invention there is provided a cup which is stackable both with and without a lid, characterised in that the cup consists of an outer wall, the cross section  
35 of which continuously decreases from a lower edge surrounding an open bottom towards an upper edge, against which a lid is adapted to adhesively but removeably abut after having been located on the cup, the  
40 outer wall at the upper edge being inwardly directed to provide an inner wall extending towards said open bottom, and the inner wall extending into a closed bottom spaced from said open bottom and inside the outer wall,  
45 said inner wall, the lid and the closed bottom being adapted to define a closed space for contents.

Cups formed in accordance with the invention can be securely and firmly stacked or  
50 piled on each other both without lids, e.g. for delivery or storage, and with lids so that different medicines for a patient can be placed in different cups on top of each other in a pile or stack. The lids can be mass-produced easily  
55 and quickly and the clear printing or stamping of required data for different patients can easily be made on the lids.

An embodiment of the present invention will now be described, by way of example,  
60 with reference to the accompanying drawings in which:-

*Figure 1* is a perspective view of the cup according to the invention;

*Figure 2* is a central section through the  
65 cup;

*Figure 3* is a view, partly in section, illustrating several cups piled or stacked on each other;

*Figure 4* is a view illustrating a sheet for manufacturing lids to the cups;

*Figure 5* is a perspective view illustrating a lid; and

*Figure 6* is a view, partly in section, illustrating several cups without lids stacked on each other.

As shown in Figs. 1 and 2, the illustrated cup consists of an outer wall 1 which, from a lower edge 2 around an open bottom, conically decreases in diameter towards an upper edge 3 where the outer wall 1 merges into a downwardly extending inner wall 4 which conically decreases in diameter towards a closed plane bottom 5. A lid 6 is adhesively but removeably positioned against the upper  
80 edge 3 and said lid consists of a circular closing part 7 and a grip tab 8 projecting outside the outer wall 1. The closing part 7 of the lid, the inner wall 4 and bottom 5 define a closed space or component for medicine in solid state, for which the illustrated cup is particularly intended to be used.

Fig. 2 also shows, by means of dashed lines, shoulders 13, e.g. four shoulders evenly distributed around the inside of the wall 1.  
95 These shoulders are arranged for facilitating the removal of stacked cups from each other, particularly when the cups without lids are stacked on each other (see Fig. 6).

As illustrated in Fig. 3 the configuration of the cup allows a stable stacking of cups on top of each other, wherein the bottom 5 of one cup abuts against the lid 6 of the underlying cup, as shown, or spaced from the lid depending on said conicity, and the outer wall  
100 1 of the underlying cup abuts against the inside of the outer wall 1 of a superimposed cup. Upon stacking, the grip tab 8 of the lid will be bent downwardly so as to abut against the inside of the outer wall 1 of the superimposed cup.  
105

The inner wall 4, in the illustrated embodiment, is for reasons of manufacture conically tapered downwardly but can, in order to form the space for the medicine also have other configurations whilst still maintaining an ability to be stacked. From a stability point of view, the bottom 5 should be plane and parallel with the lid 6 although the bottom can be formed in another way without losing the stacking ability.  
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Fig. 4 illustrates a preferred method of manufacturing of lids 6. In sheet 9 consisting of preferably white paper 10 with an adhesive coating on the underside and, for example, a silicone-treated underpaper 11, the outline of the lid 6 and tab 8 is punched out from one side of the sheet of white paper. A circle having a smaller diameter than the circle outline of the closing part 7 is punched out on the underpaper from the other side to-  
130

gether with a projecting outline positioned under the outline of the grip tab 8 of the lid, and this projecting outline is preferably positioned somewhat inside at least the outline of the free end of the grip tab 8, in order to facilitate the removal of the lids from the sheet. A part of a sheet is shown in Fig. 4 with two punched lids 6 being shown at the top of the right hand row, the remainder of the lids in the sheet having been removed to leave holes. The manufacture can take place very rapidly and simply in an appropriate tool and required data, e.g. the name and date of birth of a patient, type of medicine, or dosing, can in a simple way be printed or stamped before the removal of the lids from the sheet or on removed lids.

A lid 6 removed from the sheet 9 is shown in Fig. 5 with the underpaper 11 on the underside of the closing part 7 of the lid as well as the grip tab 8. The underpaper under the closing part 7 of the lid leaves an adhesive peripheral edge area 12 for adhesion to the upper edge 3 of the cup upon the closing of the medicine-containing space of the cup and the underpaper facing the space prevents medicine adhering to the lid. The underpaper under the grip tab 8 prevents the grip tab adhering to the fingers upon closing and opening the lid. Moreover, the underpaper reinforces the lid.

In an alternative embodiment of the lid, the underpaper under the closing part 7 of the lid and under the grip tab 8 can be punched out in one piece.

Fig 6, finally, illustrates cups stacked on each other before they have been provided with lids, for instance as they are delivered together with sheets 9 and/or stored.

The cups are preferably made of transparent plastic material. Moreover, the cups can be made in different colours in order to keep different kinds of medicine separated. The cup can, furthermore, in alternative embodiments, have another cross section than the circular cross-section as shown. Even if cups according to the invention are particularly made for the purpose of obtaining an advantageous and appropriate configuration for the apportionment of medicine, it will be appreciated that such cups can also with advantage be used in other applications.

## CLAIMS

1. A cup which is stackable both with and without a lid, characterised in that the cup consists of an outer wall, the cross section of which continuously decreases from a lower edge surrounding an open bottom towards an upper edge, against which a lid is adapted to adhesively but removeably abut after having been located on the cup, the outer wall at the upper edge being inwardly directed to provide an inner wall extending towards said open bottom, and the inner wall extending into a

closed bottom spaced from said open bottom and inside the outer wall, said inner wall, the lid and the closed bottom being adapted to define a closed space for contents.

2. A cup according to claim 1, characterised in that the cross section of the inner wall continuously tapers from said upper edge towards said closed bottom.

3. A cup according to claim 1 or 2, characterised in that the lid is made from sheet-like material and is only on the side facing said contents-receiving space provided with adhesive material for said adhesive but removeable abutment against said upper edge.

4. A cup according to claim 3, characterised in that the lid within its adhesive portion for abutment against said upper edge is provided with an underlayer of a non-adhesive material facing said space.

5. A cup according to any preceding claim, characterised in that the lid is provided with a grip tab projecting outwardly beyond the outer wall, said tab upon stacking being capable of being bent down to abut against the inside of the outer wall of the adjacent superimposed cup.

6. A cup according to claim 5, characterised in that the grip tab is, on its underside, provided with an underlayer of the same material as the underlayer of the lid within said adhesive portion.

7. A cup according to any of claims 3-6, characterised in that the lid consists of paper provided with said adhesive material and onto which paper is adhered paper as the underlayer.

8. A cup as claimed in claim 7, in which the paper underlayer is of silicon-treated paper.

9. A cup according to any of claims 4-8, characterised in that the lids are made by punching out of a sheet, a profile consisting of said underlayer adhesively secured to the upper layer.

10. A cup as claimed in any preceding claim in which the cup is formed of a synthetic plastics material.

11. A cup substantially as hereinbefore described with reference to the accompanying drawings.

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